DEPARTMENT of ENVIRONMENTAL SERVICES Water Supply & Pollution Control Division - Biology Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake: LILY POND	Lake Area (ha): 1.2	21
Town: ALSTEAD	Maximum depth (m): 8.9	
County: Cheshire	Mean depth (m): 3.7	
River Basin: Connecticut	Volume (m ³): 44500	
Latitude: 43°05'30" N	Relative depth: 7.1	
Longitude: 72°15'50" W	Shore configuration: 1.28	
Elevation (ft): 1509	Areal water load (m/yr): 14.96	
Shore length (m): 500	Flushing rate (yr^{-1}) : 4.10	
Watershed area (ha): 37.5	P retention coeff.: 0.51	
% watershed ponded: 0.0	Lake type: natural	

BIOLOGICAL:	28 January 1992	21 August 1991
DOM. PHYTOPLANKTON (% TOTAL) #1	DINOBRYON 85%	DINOBRYON 45%
#2	MOUGEOTIA 15%	FILAM. GREEN SPP. 35%
#3		(ALL ALGAE SPARSE)
PHYTOPLANKTON ABUNDANCE (cells/mL)		
CHLOROPHYLL-A (µg/L)		2.32
DOM. ZOOPLANKTON (% TOTAL) #1	KERATELLA 87%	NAUPLIUS LARVAE 45%
#2		CYCLOPOID COPEPODS 35%
#3		
ROTIFERS/LITER	22	3
MICROCRUSTACEA/LITER	1	28
ZOOPLANKTON ABUNDANCE (#/L)	23	31
VASCULAR PLANT ABUNDANCE		Common
SECCHI DISK TRANSPARENCY (m)		7.0
BOTTOM DISSOLVED OXYGEN (mg/L)	11.0	0.0
BACTERIA (fecal col., #/100 ml) #1		1
#2		1
#3		

SUMMER THERMAL STRATIFICATION:

not stratified

Depth of thermocline (m): None Hypolimnion volume (m³): None Anoxic volume (m³): 300

CHEMICAL:			LILY PONI ALSTEAD	D	
	28 January 1992		21 August 1991		
DEPTH (m)	3.0	6.0	4.0		8.0
pH (units)	5.2	5.0	5.0		5.0
A.N.C. (Alkalinity)	0.4	0.1	-0.2		-0.2
NITRATE NITROGEN	< 0.02	< 0.02	< 0.05	,,_	< 0.05
TOTAL KJELDAHL NITROGEN					
TOTAL PHOSPHORUS	<0.001	0.002	0.015		0.004
CONDUCTIVITY (µmhos/cm)	26.0	26.0	23.9		23.6
APPARENT COLOR (cpu)	< 5	< 5	< 5		24
MAGNESIUM			0.38		
CALCIUM			1.3		
SODIUM			< 1.0		
POTASSIUM			< 0.40		
CHLORIDE	< 3	< 3	< 2		< 2
SULFATE	7	7	6		7
TN : TP					
CALCITE SATURATION INDEX					

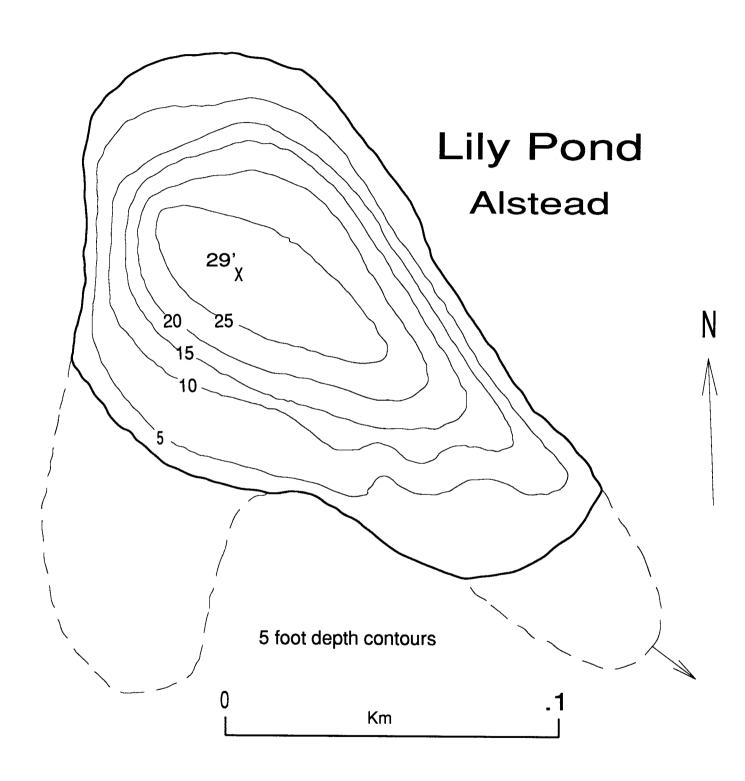
All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 1991

D.	0.	S.D.	PLANT	CHL	TOTAL	CLASS
	**	1	3	0	4	Oligo.

COMMENTS:

- 1. There are two Lily Ponds in the Town of Alstead: one in the southwest quadrant of the town and one in the southeast quandrant. The pond sampled here lies in the southeast quadrant, south of Smith Hill and northeast of Kidders Pond. A muscovite (mica) mine was located upstream of the pond on Smith Hill. The pond water was analyzed for aluminum; it was .133 mg/L (it is typically less than .05 mg/L in most ponds).
- 2. This is a remote pond sampled cooperatively with the Fish and ${\tt Game}$ ${\tt Department}.$
- 3. No wholewater plankton analysis.



FIELD DATA SHEET

LAKE: LILY POND TOWN: ALSTEAD

DATE: 08/21/91 WEATHER: CLOUDY

		ZIVI CLOODI	
DEPTH (M)	TEMP (°C)	*DISSOLVED OXYGEN	OXYGEN SATURATION
0.1	16.1	7.0	71 %
1.0	16.0	7.0	71 %
2.0	16.0	7.0	71 %
3.0	16.0	7.0	71 %
4.0	16.0	6.9	64 %
5.0	16.0	6.3	63 %
6.0	16.0	5.8	58 %
7.0	15.8	4.6	45 %
8.0	14.0	0.0	0 %
8.5	13.5	0.0	0 %
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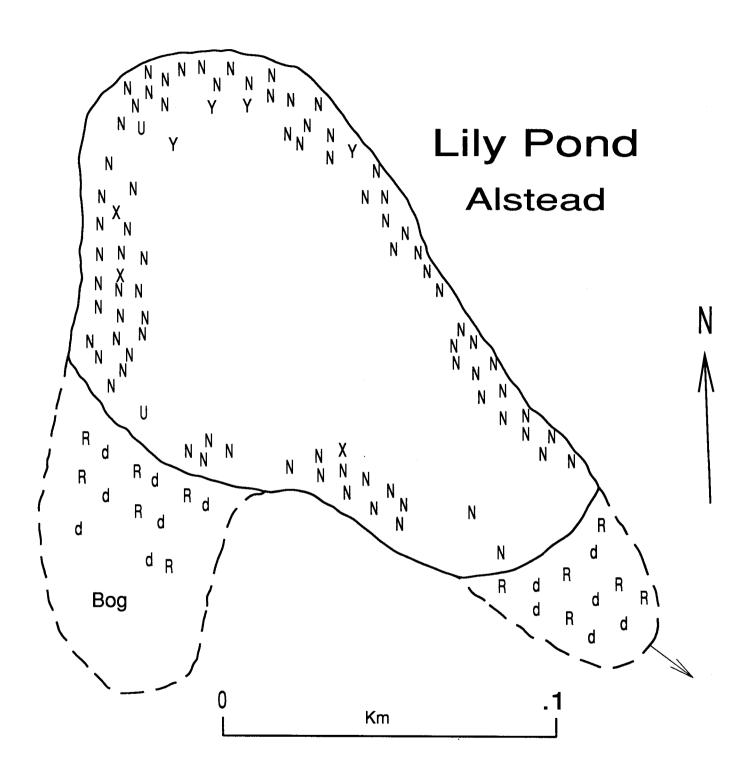
COMMENTS:

SECCHI DISK (m): 7.0

BOTTOM DEPTH (m): 8.9

TIME: 1135

*Dissolved oxygen values are in mg/L



AQUATIC PLANT SURVEY

LAK	E: LILY POND	TOWN: ALSTEAD	DATE: 08/21/9	
Кеу		NAME		
.cy	GENERIC	COMMON	ABUNDANCE	
N	Nymphaea	White water lily	Common	
R	Sarracenia purpurea	Pitcher-plant	Scattered	
d	Drosera	Sundew	Scattered	
U	Utricularia	Bladderwort	Sparse	
Y	Nuphar	Yellow water lily	Sparse	
X		Sterile thread-like leaf	Sparse	
			,	
		3		

GENERAL OBSERVATIONS:

1. Pitcher plants and sundew were along the shoreline and in the bog areas at the southeastern and southwestern ends of the pond, rather than actually in the pond water.

OVERALL ABUNDANCE: Common